



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,332	09/08/2006	Graeme Semple	59.US2.PCT	9629
26204 7590 06/14/2007 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER CHU, YONG LIANG	
			ART UNIT 1626	PAPER NUMBER
			MAIL DATE 06/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,332	SEMPLE ET AL.	
	Examiner	Art Unit	
	Yong Chu	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 150-187 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-3 and 150-187 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Preliminary Search</u> |

DETAILED ACTION

Claims 1-3, and 150-187 are currently pending in the instant application and are subject to the following lack of unity requirement.

Election/Restrictions

Restriction is required under 35 U.S.C. 372.

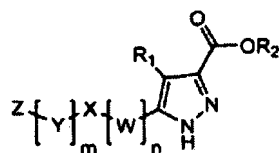
This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Claims 1-3, and 150-187 are drawn to more than one inventive concept (as defined in PCT Rule 13), and accordingly, a restriction is required according to the provision of PCT Rule 13.2

PCT Rule 13.2 states that the international application shall relate to one invention only or to a group of inventions so linked as to form a general inventive concept (requirement of unity of invention).

PCT Rule 13.2 states that unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

Due to widely divergent variables in the compound of formula (I)



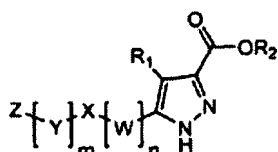
e.g. W, X, Y, Z, m, n, R¹-R⁴, the general formula I contains various

distinct special technical features. A preliminary search of the core structure of the

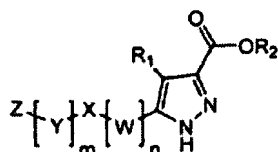
Art Unit: 1626

inventions on STN found 4697-6723 compounds sharing the core structure (see attached STN preliminary search report). Therefore the inventions are lack of unity. For this reason, further restriction is required. A precise listing of inventive groups cannot be made. The following groups may be subject to further restriction:

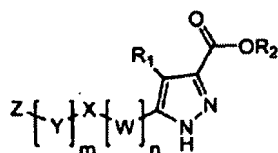
Group I: Claims 1-2, 150, 152-167 and 170-178 are drawn to a compound of

formula (I)  wherein **m** is 0, **n** is 0, **Z** is H or halogen, or a composition comprising the said compound. This group may be subject to further restriction if elected.

Group II: Claims 1-2, 150, 152-168, and 170-178 are drawn to a compound of

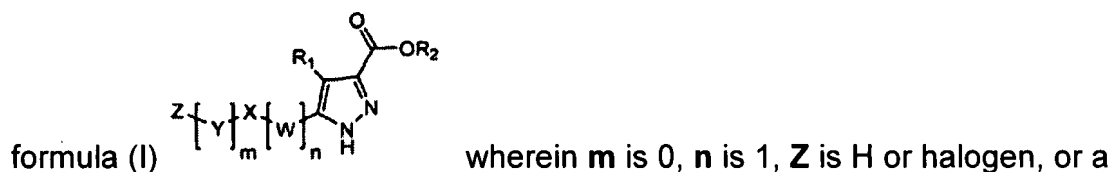
formula (I)  wherein **m** is 0, **n** is 0, **Z** is phenyl, or a composition comprising the said compound. This group may be subject to further restriction if elected.

Group III: Claims 1-2, 150, 152-166, and 169-178 are drawn to a compound of

formula (I)  wherein **m** is 0, **n** is 0, **Z** is heteroaryl, or a composition comprising the said compound. This group may be subject to further restriction if elected.

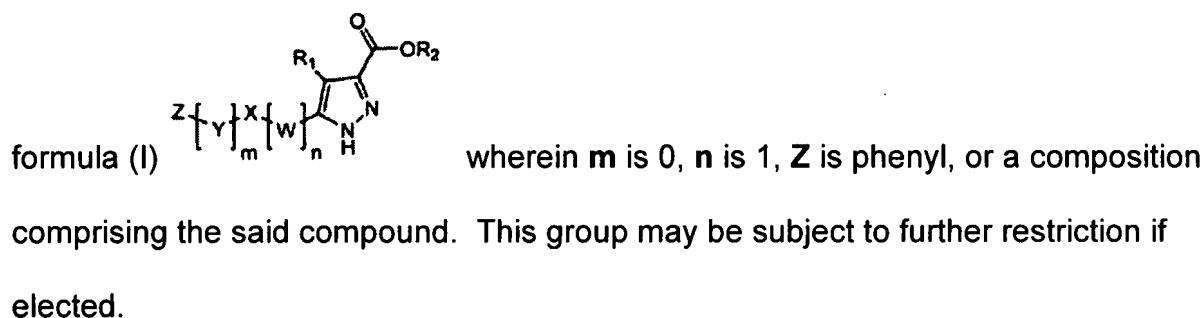
Art Unit: 1626

Group IV: Claims 1, 3, 150, 152-167, and 170-178 are drawn to a compound of

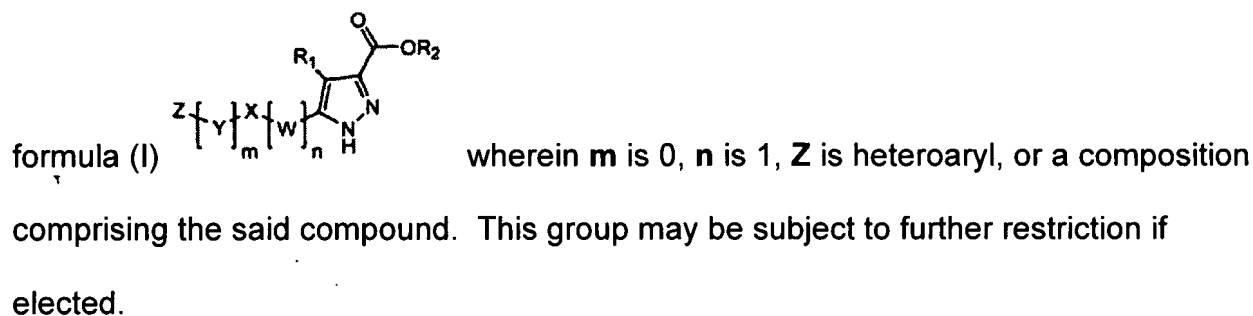


composition comprising the said compound. This group may be subject to further restriction if elected.

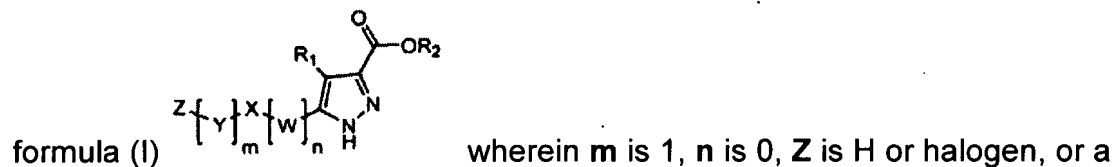
Group V: Claims 1, 3, 150, 152-168, and 170-178 are drawn to a compound of



Group VI: Claims 1, 3, 150, 152-166, and 169-178 are drawn to a compound of



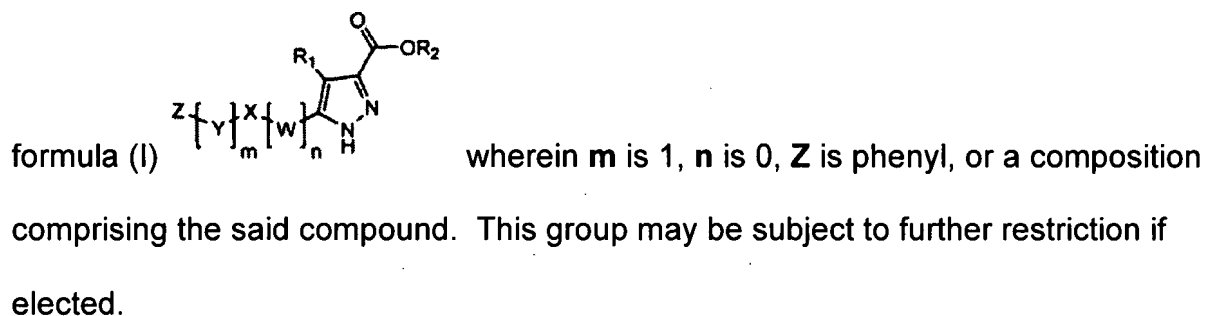
Group VII: Claims 1-2, 151, 152-167, and 170-178 are drawn to a compound of



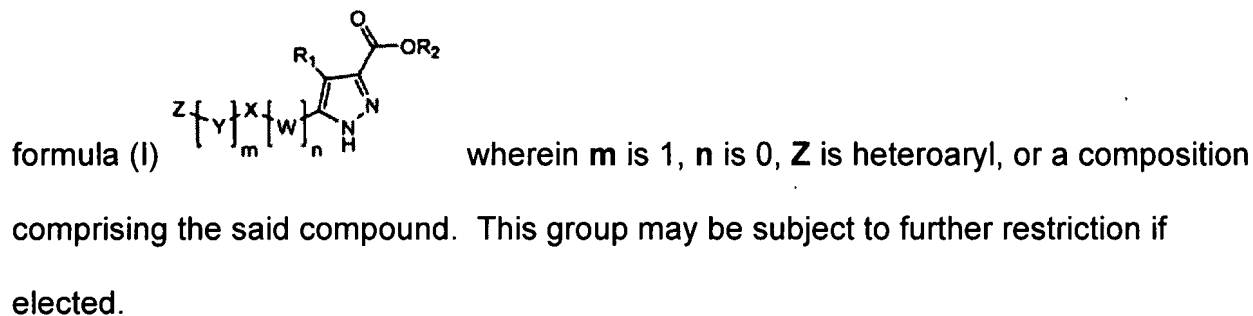
Art Unit: 1626

composition comprising the said compound. This group may be subject to further restriction if elected.

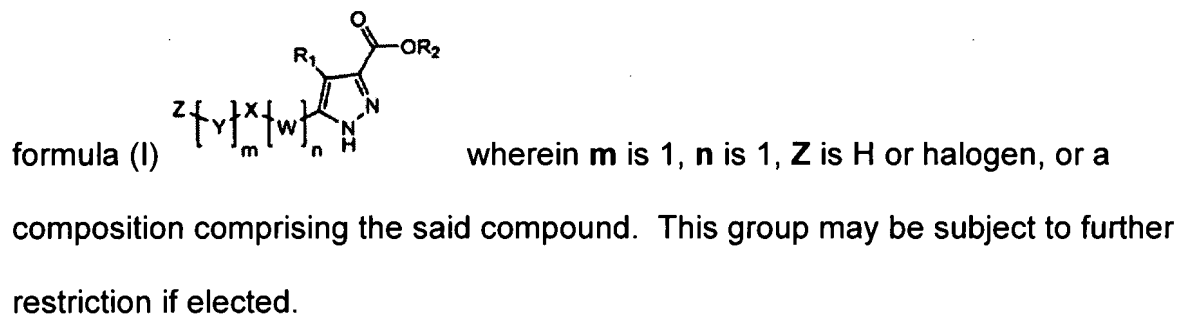
Group VIII: Claims 1-2, 151-168, and 170-178 are drawn to a compound of



Group IX: Claims 1-2, 151-166, and 169-178 are drawn to a compound of

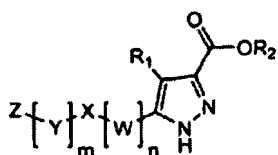


Group X: Claims 1, 3, 151-167, and 170-178 are drawn to a compound of

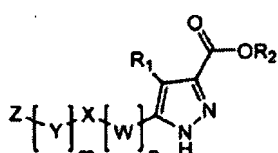


Art Unit: 1626

Group XI: Claims 1, 3, 151-168, and 170-178 are drawn to a compound of

formula (I)  wherein **m** is 1, **n** is 1, **Z** is phenyl, or a composition comprising the said compound. This group may be subject to further restriction if elected.

Group XII: Claims 1, 3, 151-166, and 169-178 are drawn to a compound of

formula (I)  wherein **m** is 1, **n** is 1, **Z** is heteroaryl, or a composition comprising the said compound. This group may be subject to further restriction if elected.

Group XIII: Claims 179-187 are drawn to a method for prophylaxis or treatment of metabolic-related disorders comprising administering the said compound or composition. This group may be subject for further restriction if elected.

Applicant also needs to elect a single compound as the elected species for initial search purpose.

The claims herein lack unity of invention under PCT rule 13.1 and 13.2 since, under 37 CFR 1.475(a) the compounds defined in the claims lack a significant structural element qualifying as the special technical feature evidenced by formula I' with numerous and widely divergent variables in the compound of formula (I').

Accordingly, unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper.

Art Unit: 1626

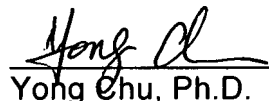
Additionally, the vastness of the claimed subject matter, and the complications in understanding the claimed subject matter imposes a serious burden on any examination of the claimed subject matter.

Telephone Inquiry

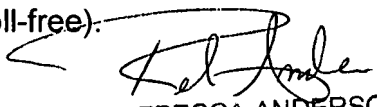
Any inquiry concerning this communication or earlier communications from the examiner should be directed Yong Chu whose telephone number 571-272-5759. The examiner can normally be reached on 7:00 am - 3:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. M^{rs}Kane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yong Chu, Ph.D.
Patent Examiner, AU 1626



REBECCA ANDERSON
PATENT EXAMINER



Joseph K. M^{rs}Kane
Supervisory Patent Examiner
AU 1626